SAN FRANCISCO PUBLIC LIBRARY
3 1223 03627 3259
90.291E

REPORT ON PRECONSTRUCTION ARCHAEOLOGICAL AUGER TESTING, BACKHOE TRENCHING, AND LIMITED TEST EXCAVATION AT THE CALIFORNIA PALACE OF THE LEGION OF HONOR, LINCOLN PARK, SAN FRANCISCO, CALIFORNIA.

By

Richard D. Ambro, Ph.D.

Submitted to

The Fine Arts Museums of San Francisco
233 Post Street
San Francisco, CA 94108

By

Holman & Associates
3615 Folsom Street
San Francisco, CA 94110

June 7, 1993

DOCUMENTS DEPT.
FEB 17 1994
SAN FRANCISCO
PUBLIC LIBRARY

RECEIVED
JUN 8 1993

D

REF
979.461
Am18r

5/S

DOCUMENTS

SAN FRANCISCO
PUBLIC LIBRARY

REFERENCE
BOOK

Not to be taken from the Library

D REF 979.461 Am18r

Ambro. Richard D.

Report on
preconstruction
1993.

S.F. PUBLIC LIBRARY

3 1223 03627 3259

INTRODUCTION:

At the request of Ms. Deborah G. Frieden of the Fine Arts Museums of San Francisco, Holman & Associates has undertaken a program of preconstruction auger, backhoe, and limited hand test excavation at the California Palace of the Legion of Honor in San Francisco, California. The program was undertaken to identify and evaluate potential archaeological cultural resources that might be impacted by planned improvements and expansion of the facilities at the museum.

The California Palace of the Legion of Honor is situated on a hill in Lincoln Park in the northwest corner of the City, overlooking the Golden Gate and the Pacific Ocean (Map 1). The Museum was constructed between 1921-1924, and was long used to exhibit the Fine Arts Museums French collection. The 1989 earthquake and recent decision to move the European collection from the DeYoung Museum to the Palace of the Legion of Honor led to the decision to undertake improvements and expansion of the museum's facilities. Proposed improvements and expansion include excavation of the entire existing Court of Honor to a depth of 35 feet below grade for new storage and exhibition areas, and a subterranean service tunnel connecting this area to the west side of the Museum. Project related excavation of soil for these improvements could impact any buried prehistoric or historic resources within the Project Area.

PREVIOUS RESEARCH:

Holman Associates had previously an extensive review of archival research to identify potential prehistoric or historic resources within or immediately adjacent to the Project Area (Ambro 1990). Although no previously recorded sites were known at or adjacent to the Project site, potential buried resources could be present and impacted by the Project.

Three prehistoric sites CA-SFr-5, CA-SFr-21, and CA-SFr-24 were recorded in the vicinity of the former Sutro Baths and Point Lobos only 0.7 miles west of the Project Area, suggesting that previously unrecorded prehistoric resources might be present in or near the Project Area. Archival research indicated that there was no Spanish, Mexican, or early American occupation of the vicinity of the Project Area, so that it is unlikely that archaeological remains of that period would be found. In 1849, Sweeny and Baugh built a system of three semaphores to alert San Francisco of the arrival of ships. One of these was located just southwest of the Project Area and there is the remote possibility that outlying structures or habitation refuse associated with its upkeep might be located within the Project Area. By 1858, what is today Lincoln Park had been set aside as a cemetery that came to be known as the "City Cemetery" or "Golden Gate Cemetery." Early burial grounds, including the Yerba Buena Cemetery in today's Civic Center, were emptied in the early 1870s and many of the bodies were removed to Golden Gate Cemetery. A

Chinese cemetery was located at the eastern end of today's Lincoln Park as well.

Golden Gate Cemetery was closed, all bodies supposedly exhumed by 1911, for relocation in Colma or elsewhere, and the former cemetery was converted into a park. Ground breaking ceremonies for the California Palace of the Legion of Honor were held in February, 1921, and the museum was completed and opened in 1924. Photographs of construction of the museum in albums in the Possession of the Fine Arts Museums of San Francisco indicate that substantial portions of the Court of Honor remained unexcavated. Since that date, the structure has continuously served as a museum, and the surrounding park as a golf course.

Over the years, occasional scraps of human bone have turned up in the park and the museum's flower beds, remnants of its history as a cemetery. In 1972, a large cypress tree blew over in the former Chinese Cemetery, and a fragmentary Chinese coffin with skeleton, were recovered from the tree's roots. These finds indicated that disassociated human remains were likely to be recovered during Project related excavation of the Court of Honor. The possibility that forgotten, partial or complete human burials might remain within the previously unexcavated parts of the courtyard could not be discounted.

THE AUGER TESTING PROGRAM:

A program of mechanical auger testing was undertaken by Holman & Associates on May 3, 1993 at the California Palace of the Legion of Honor to look for evidence of possible buried prehistoric resources threatened by the Project. A truck mounted 12" mechanical auger was employed in 4' increments with all spoils examined for artifacts, evidence of shell midden, human remains, or other evidence of occupation. The auger log summaries of observations of each boring are presented in Appendix 1.

A total of borings were place at the museum (Map 2). Six (Nos. 2-7 were placed within the Court of Honor, and one (No. 1) on the west side of the museum where a service tunnel would be excavated. No. 3 was abandoned at 4'. due to construction debris found at that depth, while all others were bored to bedrock. The general stratigraphy of the Project was revealed to be sand from to a depth of 16-18' below surface, mottled clay grading to decomposed shale. Borings were terminated at depths of 18-24.5' below the surface when obvious sterile decayed shale was encountered.

Prehistoric Resources:

None of the auger borings placed within the Court of Honor or on the west side of the building revealed any evidence of prehistoric shell midden, artifacts, or evidence of prehistoric

burials. Therefore, the results of preconstruction auger testing suggests that the possibility that prehistoric resources would be impacted by the Project is extremely low or virtually nil.

Historic Human Remains:

All five completed auger holes (Nos. 2, 4-7) placed within the Court of Honor yielded evidence of human skeletal remains and fragments of badly decayed redwood planks that probably represented remnants of coffins or similar burial containers. All were recovered from levels between 6-10 feet below the surface of the courtyard in medium tan/brown sand that contained no other cultural materials. A summary of these finds is presented below:

BORING NO. 2 (center of courtyard)

at 7-8' 1 large frag. skull (left maxilla, zygomatic, temporal)
1 intact heel bone (calcaneus)
1 vertebra
1 vertebra frag.
10+ frags. rotted sawed wood (coffin?)

BORING NO. 4 (south end of courtyard)

at 7-8' 1 frag. rotted wood

at 8-10' 4 frags. femur

BORING NO. 5 (north end of courtyard)

at 6-7' 1 patella
6 frags. long bones
15 frags. rotted sawed wood (coffin?)

BORING NO. 6 (west side of courtyard)

at 7-9' 7 small fragments of bone
much rotted sawed wood (coffin?)

BORING NO. 7 (east side of courtyard)

at 7-9' 1 large humerus frag.
3 femur frags. (fit)
1 scapula frag.
2 frags. long bone
1 square nail
2+ frags. rotted sawed wood (coffin?)

The number and size of the skeletal elements recovered in what were very modest samples of the subsurface deposits in the courtyard were unexpected. The wood and bone fragments were apparently derived from depths 6-10 feet below the surface, with several nearly intact long bones being among the elements recovered (Plate 1a and 1b). This suggested that intact burials might be present between 6-10 feet deep. The single square nail recovered in Boring No. 7 suggests a date prior to 1890 when round nail came to be common, although the remains encountered could date to any time from 1868 to the early 20th Century.

However, while the incongruous distributions of elements recovered in any given boring were perplexing. The assemblage of skeletal elements retrieved from any given boring were not restricted to the same portion of the anatomy. For example Boring No. 2 yielded a sizable portion of a skull, two vertebrae, and a foot bone. Extensive experience in retrieving prehistoric burials in construction contexts indicates that this is not the expected representation of skeletal elements of an intact burial "sampled" by mechanical equipment. Possible explanations were that several superimposed intact burials were represented, or the skeletal elements were mixed, perhaps as exhumed burials from another cemetery reburied in boxes, mixed bone deposits buried into a trench, or remnants of intact burials left from exhumation ca. 1911.

Data from augering were not sufficiently exact to determine which of these circumstances was accountable for the human remains and apparent coffin parts recovered in the borings. What was clear was that proposed Project related excavation of the courtyard would encounter numerous, probably hundreds of human remains. These might represent intact burials or reburials, that would be impacted by construction related excavation.

A meeting between Holman & Associates, and the Fine Arts Museums of San Francisco was held on May 6, 1993 to discuss the findings and formulate an appropriate strategy. All concurred that an exploratory excavation with a backhoe to be followed by hand excavation of remains revealed was the best way to document and determine whether intact burials were indeed present between 6-10 feet below the surface.

THE BACKHOE TESTING PROGRAM:

Holman & Associates proposed to excavate an exploratory trench down to about 6 feet below the surface to permit careful search by hand for intact burials between 6-10 feet. At 10 feet, the trench would measure 10 feet wide by 40 or 50 feet long. providing sufficient exposure to make the assessment. As excavation was to conducted in sand with no shoring, an excavated slope of 1.5:1 was required, that would result in a trench 40 feet wide and 70-80 feet long at the surface.

Excavation was undertaken with the assistance of a backhoe and operator from Ryan Engineering, Inc.. Excavation proceeded carefully in 1-2 ft. increments, and almost immediately evidence of decayed redwood fragments and disarticulated human remains were encountered between 3-4 ft. below the surface (B.S.). Each isolated find of human remains or artifact was assigned a "Locus" number and plotted with reference to horizontal location with reference to a nail driven on the centerline on the south side of the entrance to the courtyard (Datum A) (Map 3; Appendix 2). All depths "below surface" (B.S.) were recorded from Datum B adjacent to the pedestal formerly supporting the bronze figure of the "Thinker." These materials were then collected. In the case of significant or extensive finds, they were photographed in situ, and a plan view drawn prior to their removal.

As the extent of the area of scattered wood and human remains below 3' B.S. came to be recognized, further excavation stopped. A broad area (40' N-S) X 45' (E-W) was carefully scraped to a depth of approximately 38-40" B.S. In the course of scraping this area, an obvious break between tan sand and mottled darker brown sand was noted that was labeled Feature 1 (Map 3; Plate 3a). The area of concentrated scatters of human bone, decayed redwood fragments and other materials came to be designated Locus 8 and Locus 20 (Map 3). and were later carefully exposed by hand, recorded, and carefully collected.

A deeper trench was then excavated at the south end of the area between the former base of the "Thinker" and Auger Boring No. 2, the boring that yielded such intriguing and perplexing human remains. The resulting deep trench measured 45'(E-W) X 20'(N-S) and was excavated to a depth of 7 ft. B.S. (Map 3; Plate 3b). Human remains, large wood fragments, and artifacts encountered in excavating this trench were assigned Locus numbers and recorded prior to removal.

Test Excavation Unit 1:

A 3' X 6' test excavation unit was laid out at 7' B. adjacent to Boring Hole No. 2 (Map 3). The purpose of this test unit was to continue to probe the sandy deposits for evidence of intact burials and/or disarticulated human remains and other artifacts. The results could then be compared with the coarser stratigraphic observations derived from the auger borings, especially Boring No. 2. Test unit 1 was hand excavated in increments of 6" with all spoils screened through 1/8" mesh. At 9 ' excavation of the test unit was restricted to the eastern half of the unit which continued down to a depth of 11' B.S.. Materials recovered in this test unit were:

7'-7'6" B.S.	tan sand	3 rusted metal objects (nails?)
		1 rusted round nail
		2 shoe scrap with metal eye
		14 rotted wood frags.

7'6"-8'	tan sand	1 cervical vertebra 1 metatarsal 32 rotted wood frags.
8'-8'6"	tan sand/ red br. clay	1 rusted nail 1 rusted metal fragment 40 rotted wood frags.
8'6"-9'	dk. brown sand/ red br. clay	1 rib frag. 1 vertebra 1 metatarsal 24 rotted wood frags. 1 rusted metal frag. 1 tar bit 1 unworked chert pebble
9'-9'6"	dk. brown sand	(sterile)
9'6"-10'	dk. brown sand	(sterile)
10'-10'6"	dk. brown sand	(sterile)
10'6'-11'	dk. brown sand	(sterile)

Profile 1:

The northern wall of the trench excavated to a depth of 7' B.S. resulted in a broad, 14' wide, irregular profile exposing the stratigraphy of the deposits to the north. A composite drawing of this sidewall was combined with the northern wall of Test Unit 1 to produce the composite Profile 1 (Figure 1). This profile illustrates what recording and collecting of human remains and fragments of wood, etc. had revealed as the trench was excavated. Human remains and apparent coffin parts were found from 30-40" to 9' B.S., and that this disturbed sand is characterized by alternating strata of tan and medium gay brown sand, all of which contain human remains, wood fragments, and scattered nails and other metal (Figure 1). These strata represent soils used to backfill a large trench after hasty exhumation of burials had taken place. This trench was apparently excavated to a depth of 9' B.S. as indicated by the recovery of bone, wood, and other materials at that depth in Test Unit 1. Below 9' B.S., the dark brown, slightly peaty/clayey sand appears to be sterile and undisturbed.

The strata of backfill material slope downward toward the east suggesting that the major portion of the trench lay east of the exposure made by our backhoe. Although its total width was much greater, the backhoe trench suggests that the area backfilled after exhumation was at least 40 ft. wide. As discussed below, data collected at 39"B.S. indicate the trench was oriented NE-SW and apparently extended beyond the 40 ft. length of the backhoe excavation.

Feature 1

An obvious break between tan sand to the west and mottled darker tan/brown sand to the east was noted at 39" B.S. over the entire 12 ft. exposure north of Profile 1 (Plate 3a). The irregular linear margin of this break was oriented NE-SW and correlated clearly with the contact between Strata I and II on Profile 1. This correlation indicated that the old exhumation trench of ca. 1911 extended beyond the boundaries of the backhoe exposure. Just below the first recognition of the soil break of Feature 1 at 39"B.S., two broad areas of bone and wood scatters (Loci 8 and 20) were exposed and recorded, with the data exposed in Profile 1 indicate that human remains and apparent coffin parts are ubiquitous in these deposits.

Selected Loci:

Discussion of several significant loci recorded warrant discussion at this point to illustrate the character and disturbed quality of all human remains and historic artifacts encountered during backhoeing and hand excavation.

Locus 1

This was a find of a complete cranium and a vertebra at 30"B.S. (Map 3; Plate 2a). This find documents that complete or nearly complete large skeletal remains are present and may be found at any level of the uppermost 9' of sand.

Locus 24

This locus consisted of a complete mandible, a vertebra frag. and a square nail found at 7'B.S. (Map 3; Plate 2b). This find illustrates that many large skeletal remains were left or missed at the bottom of the exhumation trench in ca. 1911. It would also assist in confirm the stratigraphic placement of the large skeletal elements found at approximately 7-8'B.S. in nearby Auger Boring No. 2.

Locus 8

This broad exposure measured 8" X 10' and consisted of disarticulated human remains and historic artifacts at 21-39"B.S. (Map 3; Figure 2). This assemblage straddles the irregular boundary (Feature 1) between Strata I and II of Profile 1. It consisted of 13 fragments of human skeletal materials and 52+ historic artifacts as listed below:

2 phalanges
1 humerus frag.
1 femur frag.
1 scapula frag.

1 metatarsal
3 rib frags.
4 bone frags.
1 glass frag.
1 melted glass drop
1 white ceramic frag.
6 rusted nails (?)
2 frags. rusted metal
41+ wood frags.

Locus 20

This was another broad exposure of scattered 13 human remains and 47+ historic artifacts in an exposed area measuring 8'X 12' at depth of 20-40" B.S. (Map 3; Figure 3). The scatter consisted of:

4 cranium frags.
1 metatarsal
1 tarsal
1 calcaneus
1 phalange
1 vertebra
4 bone frags.
1 rusted coffin(?) handle
4 rusted nails (?)
42+ wood fragments

In addition to illustrating the abundant, mixed and disarticulated finds at this depth, the presence of a probable rusted coffin handle bolsters the interpretation that decayed redwood fragments are in fact broken remnants of coffins or similar containers.

Locus 23

This was an exposure of 40+ scattered decayed redwood plank fragments measuring 5/8" thick found at 61-75"B.S. (Map 3; Figure 4). This scatter lies close to the apparent bottom of the exhumation trench and suggests that many coffins were emptied without removal from the trench, or remnants of exhumation where the coffins were already badly decayed and collapsed prior to exhumation.

Backdirt Piles:

Despite the careful excavation and monitoring of the backhoe testing, the presence of human remains and artifacts in the backdirt piles was unavoidable. THis was especially clear after the rains of the week 5/24-5/28 when scattered artifacts and human remains were exposed on the piles of backdirt. These were collected:

5 cranial frags
1 mandible frag. + 5 teeth

1 mandible frag. (sawed)
9 vertebrae frags.
8 rib frags.
8 long bone frags.
3 foot bones
2 bone frags.
1 rusted twisted wire
1 rusted round nail
1 milk glass frag.
1 porcelain plate frag.
1 leather hobbed boot heel

These materials indicate that due to the abundance and fragmentary quality of the materials, monitoring alone will not recover all human remains and significant artifacts as the soils of the Court of Honor are excavated. In order to recover such materials, screening of all spoils 0-10' B.S. would be in order. The recovery of badly scattered non-burial trash materials as well as the possibility of retrieving jewelry or burial tags alone would be of considered importance as discussed below.

DISCUSSION:

Human Remains:

Limited backhoe exposure and excavation of a single test unit from 70-110 inches below grade has revealed that the central area of the Court of Honor to be highly disturbed to a depth of 8-9 feet below the existing surface. In contrast to the impression given by auger testing that human remains and apparent fragments of wooden coffins were restricted to depths of 6-10 feet below the surface, backhoeing and limited test excavation revealed that scattered, disarticulated human remains and presumed fragments of coffins were found throughout the deposit from 6" to a depth of 9 feet below the surface. No evidence of partly or completely articulated burials was exposed in the backhoe trench and associated test excavation.

Human remains recovered ranged from numerous small fragments to a complete cranium (at 1'6"B.S.), a complete mandible (at 7 ft. B.S.), several nearly complete long bones, as well as complete examples of other smaller skeletal elements. These fragments as well as the larger or complete elements appear scattered randomly throughout the disturbed deposit, revealing that the impression given by the augering data to have been distorted by sampling bias in a 1 ft. wide augerhole. The highly disturbed and mixed conditions of the sand containing human remains and coffin fragments apparently resulted from very hasty and obviously incomplete exhumation of burials in the area ca. 1911.

These data and those obtained in auger testing clearly indicate that disarticulated human remains are likely to occur abundantly in the uppermost 9 feet of sand of all previously undisturbed areas of the Court of Honor. These are certainly to

number in the many hundreds and possibly several thousand elements of sizes ranging from unidentifiable bits to complete scapulae, vertebrae, pelves, long bones, and even crania. No evidence of intact coffins or burials were found during backhoe testing, but the evidence of hasty exhumation ca. 1911 and the area remaining unexcavated in the Court of Honor suggest that intact burial might be present and would be impacted by Project related excavation. This possibility is bolstered by the previously reported find of a Chinese coffin in the roots of a tree in the supposedly emptied Chinese Cemetery at the east edge of Lincoln Park (Ambro 1990:Appendix 1).

Ms. Deborah G. Frieden of the Fine Arts Museums of San Francisco has informed us of a conversation with an elderly San Francisco woman who recalls or heard that human remains found during excavation of the original foundations of the museum between 1921-1924 were reburied in a pit at one of the corners of the building (Personal Communication 5/93). Unfortunately, the individual could not identify the corner where the reinterred remains would be located. Therefore, there remains the likelihood that human remains might turn up elsewhere where Project related trenching, boring, or tunneling would occur. Any such work at the corners or along the foundations might relocate the reported pit containing human remains found during the original construction Project.

The date of the burials represented by scattered remains at the Project site would fall sometime between ca. 1868 and the turn of the Century, certainly no later than 1911 when the cemetery was supposedly closed and emptied. The recovery of several square nails with attached decayed redwood reflects use of the cemetery prior to 1890 when round nails became common in use. However, the recovery of at least several round nails with attached decayed redwood (Locus 25) indicates that some of the interments occurred after 1890. Nothing in the data at hand precludes the possibility that some of the human remains actually represent earlier burials relocated from older cemeteries as these were converted to other uses.

Despite the numerous fragments of skeletal elements and fragments of coffins, virtually no evidence of clothing and no evidence of jewelry was recovered either in augering or in backhoeing. The 19th Century boot heel recovered from the backdirt pile and the scrap of leather with an eyelet recovered in Test Unit 1 at 7'-7'6"B.S. may represent remnants of the clothing of the dead, or possibly parts of the sparse trash scatter that contributed the several ceramic and glass fragments recovered. However, one is left with the impression that perhaps the bodies were buried without shoes, jewelry, or perhaps even clothing, but instead may have been interred shrouded simple in coffins. Given the hasty and incomplete manner in which they were exhumed, one would expect some shoe parts to survive among the bones and coffin parts encountered.

The remains were likely to have been remnants of burials unclaimed by relatives, or those buried at public expense as indigents. The recovery of a mandible fragment with two obvious sawed edges suggests that at least one burial was that of an anatomical subject or an individual that had undergone an autopsy prior to burial. Mr. Dean L. McCleod of the American Research Bureau of San Francisco informed us that his research on San Francisco's cemeteries indicated that the California Palace of the Legion of Honor was constructed in the former Potter's Field" area (Personal Communication 5/21/93).

Until further archival research is undertaken, the possibility that burials relocated from other, earlier cemeteries such as the Yerba Buena Cemetery in today's Civic Center were among the interments in the Project Area cannot be precluded at this time. Such reburial of earlier Gold Rush burials would have likely to have been disarticulated and mixed when reburied either in their original coffins or new containers. The identification of a discrete population of Gold Rush burials, however disturbed, would be of both historic and archaeological interest and importance. Further research on the cemetery, its layout and history of burials, as well as records of the exhumations ca. 1911 could provide data to clarify these questions.

Until the date of burial and origin of the population represented by the human remains in the Court of Honor and nearby areas are identified, discussion of the research potential must be limited to a general population samples of 19th Century San Franciscans who died between ca. 1868-1900+. Individuals who died in the last quarter of the 19th Century were likely to include those who were pioneers to an Francisco, arriving in the Gold Rush or shortly thereafter as City Building Period immigrants to California. If intact burials are actually present, complete analyses of entire skeletons would provide data on the age, sex, health and trauma patterns, nutrition, insight into medical care of particular socio-economic groups if identifiable, ethnicity or racial identity. If the population is documented to be the poor and indigent, evidence of poor nutrition such as Harris lines in long bones, and poor access to health care such as high rates of pre-mortum tooth loss/untreated decay may be reflected. Samples of incomplete skeletal materials or those completely disarticulated and mixed may still be analyzed for demographic, racial, and health profiles as amply proven from studies of prehistoric ossuaries (Ubelaker 1974). Even highly fragmented samples are amenable to some levels of such study where samples are abundant enough (White 1992). Assessment of the research potential of the sample must await completion of the monitoring and data collection process and identification of the age and origin of the burial population through archival research.

Trash Scatter:

The very sparse collection of burned and unburned white ware and porcelain as well as several fragments of melted glass appear

to have all been derived from the upper 3-4 feet of sand in the courtyard. Although this material may reflect the former existence of Gold Rush trash deposits derived from the maintenance crew of the semaphore nearby, there is no supporting evidence for such an assertion. The lack of more precise time markers such as open pontil bottle bases, ceramic marks of mid-19th Century date, and the apparent lack of common Gold Rush trash constituents such as sawed animal bones, square-toed shoes, coal, box and barrel parts, etc. do not indicate that the materials recovered were disturbed remnants of Gold Rush trash. However, nothing precludes this possibility either. However, given the stratigraphic evidence of deep disturbance in the Court of Honor resulting from inhumation and exhumation of later 19th Century burials, the likelihood that intact trash deposits of any age remain is very slight.

Potential Impacts

Impacts to any burials or disarticulated human remains, or possible buried cultural resources such as trash pits or the unlikely find of prehistoric resources would result from construction related excavation of the Court of Honor to a depth of 35 feet below the existing surface. Installation of shoring around the perimeter of the courtyard would entail boring for pilings to support shoring of the existing museum structure. In addition, in order to strengthen the foundation of the portal at the north end of the courtyard, it will be necessary to excavate or tunnel under the existing gate. In addition, excavation of the subsurface service entrance would require tunneling beneath parts of the existing building and the west side of the museum. Finally, Mr. Gary Crittenden of Hensel-Phelps has indicated that it would also be necessary to tunnel under portions of the northeast corner of the existing building, and perhaps elsewhere as well. All could impact or at least expose human remains and other possible cultural resources.

Excavation of the interior of the Court of Honor and open sections of the service tunnel on the west side would entail use of a backhoe. It is anticipated that the excavated dirt from the Court of Honor would be evacuated using a conveyor belt leading to the exterior area, to the north of the museum (personal communication: Mr. Gary Crittenden). The soil would then be transported to a disposal area or facility.

Legal Imperatives:

The following recommendations were formulated to address both the requirements of CEQA concerning cultural resources, and legal requirements concerning the treatment of human remains. The remnant of Golden Gate Cemetery located in the existing Court of Honor may contain potentially significant archaeological and physical anthropological data on 19th Century San Francisco. The

final determination of the size, quality, and potential significance of the data has only been partly documented at this time.

Section 24791 of the State of California Government Code on the rights and duties of Coroners and Medical Examiners requires that they recover or oversee the recovery of all human remains. The State of California Health and Safety Code, Section 7104 requires the interment of indigent (and unidentified) people. Dr. Boyd Stephens, San Francisco Coroner and Medical Examiner has informed Holman & Associates that all human remains must be recovered from the Court of Honor and other areas to be impacted by the Project (Personal Communication- 6/2/93).

Dr. Stephens also indicated that recovery of all human remains threatened or exposed by the Project are required to avoid infractions of the following State of California Health and Safety Code sections. Section 7051 forbids the illegal removal of human remains from a cemetery, Section 7355 that forbids the illegal transportation of a dead body, and Section 7054 that deals with the illegal deposition of human remains outside of a cemetery.

He also expressed a desire to recover any burial markers, coffin plates, small numbered brass tags frequently placed in coffins for identification purposes, and any personal effects such as jewelry that might assist in the identification of some of the remains.

RECOMMENDATIONS:

1. An archaeological monitoring and data recovery program should be formulated and implemented during construction related excavation, borings, and/or tunneling procedures in the Court of Honor and elsewhere in the Project Area. Archaeological monitors should have experience in recognition and exposing human remains, as well as both prehistoric and historic archaeological contexts. Monitoring should be under the direction of an experienced historic and prehistoric archaeologist. Monitors would be responsible for the preliminary identification and recovery of all human remains or artifacts from the excavated spoils and *in situ* contexts.

The archaeological monitor(s) would be authorized to stop or relocate excavation in order to examine or retrieve any find and to determine its condition and possible degree of articulation or completeness. A daily log would be kept of observations and other data concerning the monitoring procedures.

2. The uppermost 10 feet of the soil of the Court of Honor should be excavated under the direction of archaeological monitors to identify and collect disassociated human remains and other data, and to look for possible intact burials that might be present in the Project Area. A monitor should be assigned to

each piece of equipment, another to observe backdirt piles, and a monitor should also be assigned to observe the outflow of soil at the terminus of the conveyor belt to be used to evacuate the excavated soil from the courtyard.

A screening mechanism, possibly mechanized, with an appropriate mesh size should be employed to screen the excavated dirt at the terminus of the conveyor belt to facilitate the recovery of all identifiable human bone or artifacts not recovered by monitors within the courtyard.

After the uppermost 10 feet of the soil in the Court of Honor have been removed under the supervision of the archaeologist, removal of deeper soils and those to be excavated elsewhere in the Project would proceed normally with the presence of an archaeological monitor or monitors during excavation, borings, or tunneling.

3. In the event a partly or completely articulated burial, or recognizable discrete assemblage of reburied skeletal remains is recognized, excavation would be relocated until an appropriate mitigation procedure is formulated. The monitor would immediately notify the supervising archaeologist of the find.

The supervising archaeologist would notify the Office of the San Francisco Coroner and Medical Officer, and the Fine Arts Museums of San Francisco of the find or finds and in consultation the appropriate exposure, data recording, and removal of the burial(s) would be formulated and implemented.

4. In the unlikely event a prehistoric burial is discovered during any portion of the monitoring of excavations, work would be halted or relocated until the Office of the San Francisco Coroner and Medical Officer can be notified. He would then notify the Native American Heritage Commission who would appoint or notify the most likely descendants of the find. The most likely descendants the archaeologists and the an Francisco Fine Arts museum would jointly formulate appropriate mitigation measures for the prehistoric burial.

5. In the event a non-burial associated historic find such as a trash pit or foundation, or the unlikely event a prehistoric occupation deposit or artifacts is found, work would be halted or relocated until the find can be identified. After notification of the Fine Arts Museums and the San Francisco Landmarks Preservation Board, an appropriate mitigation program would be formulated and implemented.

6. After completion of all monitoring and other data retrieval procedures, a preliminary evaluation of the collection of human remains recovered would be made to assess the collection's re-

search potential. Criteria for this assessment would include condition and size of the collection, the range of skeletal elements represented, and other factors. Based on this evaluation, an appropriate program of physical anthropological analyses would be formulated and proposed.

7. A focussed program of further archival research should be undertaken to more completely document the history of the portion of Golden Gate Cemetery where the California Palace of the Legion of Honor is located. Burial records, maps of plots and burial sections, records of disinterment, etc. may survive and assist in the identification and interpretation of the population represented by the human remains recovered.

8. All findings of monitoring, the results of analyses of skeletal data and artifacts, and results of further archival research should be presented in a professional quality report.

9. Significant artifacts and non-human samples collected would be curated in an appropriate curation facility.

10. The supervising archaeologist should maintain contact with the Office of the Coroner and Medical Officer of the City and County of San Francisco during monitoring of excavation activities. After analyses, arrangements would be made to turn over any human remains recovered to the Coroner's Office for final disposition.

BIBLIOGRAPHY:

Ambro, R.D.
1990 Report on Archival Research of Cultural Resources for the Proposed Facilities Expansion Project at the California Palace of the Legion of Honor, Lincoln Park, San Francisco, California. Report submitted to the Corporation of the Fine Arts Museums of San Francisco.

Ubelaker, D.H.
1974 Reconstruction of Demographic Profiles from Ossuary Skeletal Samples: a Case Study from the Tidewater Potomic. Smithsonian Contributions to Anthropology 18, Washington, D.C.

United States Geologic Survey
1973 San Francisco North, California. 7.5' Series Quad Sheet. Washington, D.C.

White, T.D.
1992 Prehistoric Cannibalism at Mancos 5-TUMR-2346. Princeton University Press, Princeton.

APPENDIX 1

ARCHAEOLOGICAL AUGER LOGS
CALIFORNIA PALACE OF THE LEGION OF HONOR
5/3/93

(West side of Museum)

Depth	Soil Color/Texture	Cultural Items/Comments
0-5'	Moist medium/dark tan sand	Fill, mixed?
5-15'	Tan sand	Dune sand
15-21.5'	Reddish tan/yellow tan clay with sand and bits of rock	Decomposed bedrock
21.5-25'	Compact tan sandy clay with dark brown metamorphic rock	Decomposed bedrock

BORING NO.2
(center of courtyard)

Depth	Soil Color/Texture	Cultural Items/Comments
0-0.5'	Brown sand	
0.5-10'	Dark tan/light brow sand	(at 7-8') 1 large frag. skull 1 intact calcaneus 1 vertebra 1 vertebra frag. 10+ frags. rotted sawed wood (coffin?)
10-15'	Dark brown sand	
15-16'	Tan sand	
16-22'	Decomposed gray-black/ red tan shale/serpentin-aceous rock and clay	Decomposed bedrock

BORING NO.3
(south end of courtyard)

Depth	Soil Color/Texture	Cultural Items/Comments
0-4"	Cement slab of sidewalk	
4"-4'	Brown sand	1 Tile frag. 1 Wood frag. Cement frags.
4'	Yellowish concrete.mortar	unit abandoned at 4'

BORING NO. 4
(south end of courtyard)

Depth	Soil Color/Texture	Cultural Items/Comments
0-4"	Cement slab of sidewalk	
4"- 7'	Dark tan/light brown sand	2 rusted round nails
7'-8'	Same with much coarse sandy mortar	1 rotted wood frag.
8-10'	Dark brown/tan mottled sand	1 mandible frag. 4 femur frags. sparse rotted wood
10-18'	Dark brown/ tan mottled sand	
18-21'	Mottled tan/red/gray clay with bits of rock	Decomposed bedrock
21-23'	Firm gray shale/serpentin-aceous rock	Decomposed bedrock

BORING NO. 5
(north end of courtyard)

Depth	Soil Color/Texture	Cultural Items/Comments
0-4"	Cement slab of sidewalk	
4'-10"	Gravel	
10"-9'	Brown sand	(at 6-7') 1 patella 6 frags. long bones 15 frags. rotted sawed wood
9-14'	Tan sand	
14-18'	Yellow/red clay and gray shale	Decomposed bedrock

BORING NO. 6
(west side of courtyard)

Depth	Soil Color/Texture	Cultural Items/Comments
0-6"	Cement slab of sidewalk	
6"-1.5'	Red gravel and clay	
1.5-9'	Brown sand	(at 7-9') 7 small bone frags. much rotted sawed wood (coffin?)
9-18'	Tan sand	
18-20'	Gray/tan/dark tan clay	Decomposed bedrock
at 20'	Gray shale	Bedrock

BORING NO. 7
(east side of courtyard)

Depth	Soil Color/Texture	Cultural Items/Comments
0-6"	Cement slab of sidewalk	
6"-1'	Gravel and sand	
1-9'	Medium brown sand	(at 7-9') 1 large humerus frag. 3 femur frags. (fit) 1 scapula frag. 2 frags. long bone 1 square nail 2+ frags. rotted sawed wood
9-16'	Brown sand	
16-19.5'	Yellow/tan/gray clay with gray shale	Decomposed bedrock

APPENDIX 2

LIST OF LOCI WITH HUMAN REMAINS, ROTTED WOOD COFFIN FRAGMENTS, AND ARTIFACTS FOUND IN BACKHOE AND HAND EXCAVATION TESTING AT THE CALIFORNIA PALACE OF THE LEGION OF HONOR 5/20-5/28/93

LIST OF LOCI WITH HUMAN REMAINS, ROTTED WOOD COFFIN FRAGMENTS, AND ARTIFACTS FOUND IN BACKHOE AND HAND EXCAVATION TESTING AT THE CALIFORNIA PALACE OF THE LEGION OF HONOR 5/20-5/28/93

* horizontal location measured from DATUM A on centerline at entrance to courtyard
** depths measured from DATUM B

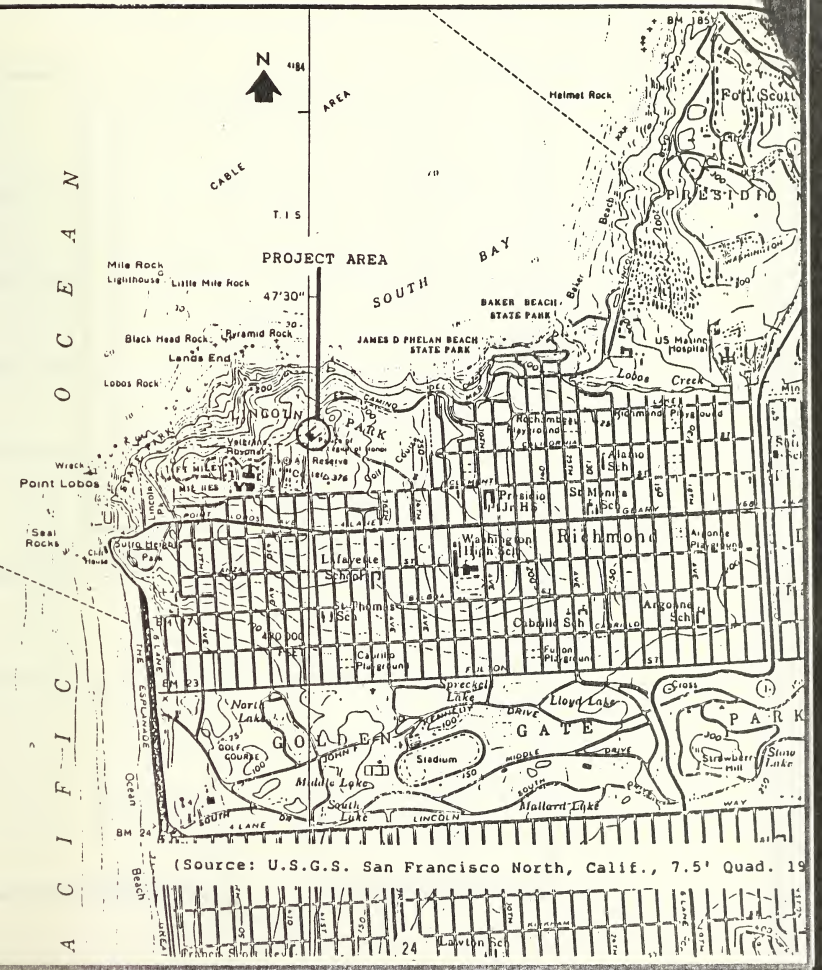
LOCUS NO.	DEPTH (B.S.)**	COORDINATES*	ITEMS
Locus 1	30"	55'S./3'E.	1 complete cranium
Locus 2	32"	36'S./2'E.	2 long bone frags.
Locus 3	34"	32'S./7'E.	1 tooth 1 patella 1 cranium frag.?
Locus 2/3	(Backdirt)		2 ribs 1 tooth 3 long bone frags. 2 wood frags.
Locus 4	30"	47'S./2.5'E.	1 rib
Locus 5	24"	47.5'S./5'W.	3 longbone frags.
Locus 6	36.5"	57'S./5'W.	1 large rusted hinge(?) 3 frags. wood
Locus 7	32"	32'S./7'W.	3 mandible frags. 1 humerus frag.
Locus 8	21-39"	44-52'S./2-10'W.	(excavated) 2 phalanges 1 humerus frag. 1 femur frag. 1 scapula frag. 1 metatarsal 3 rib frags. 4 bone frags. 1 glass frag. 1 melted glass drop 1 white ceramic frag. 6 rusted nails (?) 2 frags. rusted metal 41+ wood frags.
Locus 9	5'4"	60'S./1'W.	Rusted metal object
Locus 10	5'	58'S./1'W.	4 wood frags.

Locus 11	4'8"	62'S./2'E.	1 scapula frag. 1 bone frag.
Locus 12	5'1"	64'S./1'E.	1 metatarsal 2 rib frags. 1 rusted object 2 wood frags.
Locus 13	3'10"	65'S./1'W.	1 sternum
Locus 14	4'11"	55'S./5'W,	5 wood frags.
Locus 15	about 4.5' (backdirt)		1 wood frag.
Locus 16	3'1.5"	38'S./4'W.	1 tarsal 1 carpel 3 tibia frags. 5 bone frags. 1 rusted metal object 2 wood frags.
Locus 17	6"	68'S./10'E.	(below pavement) 2 long bone frags.
Locus 18	0-23"	27'S./2'E.	1 rib frag. 1 rusted metal object
Locus 19	1'11"	46'S./9'W.	1 cervical vert. 1 scapula (backdirt)
Locus 20	20-40"	34-42'S./6'E.-6'W.	(excavated) 4 cranium frags. 1 metatarsal 1 tarsal 1 calcaneus 1 phalange 1 vertebra 4 bone frags. 1 rusted coffin(?) handle 4 rusted nails (?) 42+ wood fragments
Locus 21	NOT ASSIGNED		
Locus 22	2'	44'S./11'E.	1 femur frag.
Locus 23	5'8"-6'1"	73-77'S./4.5'E.-4.5'W.	(excavated) 40+ wood frags.
Locus 24	7'	56'S./4'E.	1 mandible 1 bone frag. 1 square nail

Locus 25	2'8"	36'S./9'E.	1 long bone 1 rusted round nail in rotted sawed redwood
NO PROVENIENCE (Backdirt)			5 cranial frags 1 mandible frag. + 5 teeth 1 mandible frag. (sawed) 9 vertebrae frags. 8 rib frags. 8 long bone frags. 3 foot bones 2 unid. bone frags. 1 rusted twisted wire 1 rusted round nail 1 milk glass frag. 1 porcelain plate frag. 1 leather hobbed boot heel

MAP 1

Project Location

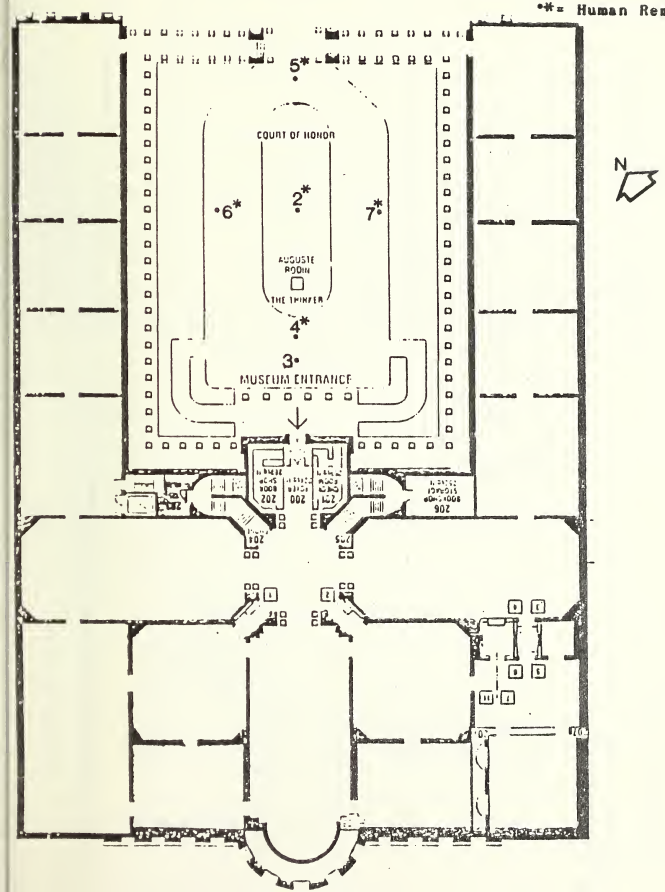


MAP 2

Location of Auger Borings
5/3/93

.1= Auger Boring

**= Human Remains



MAP 3

Location of Backhoe Testing, Test Unit, Profile 1, and Loci

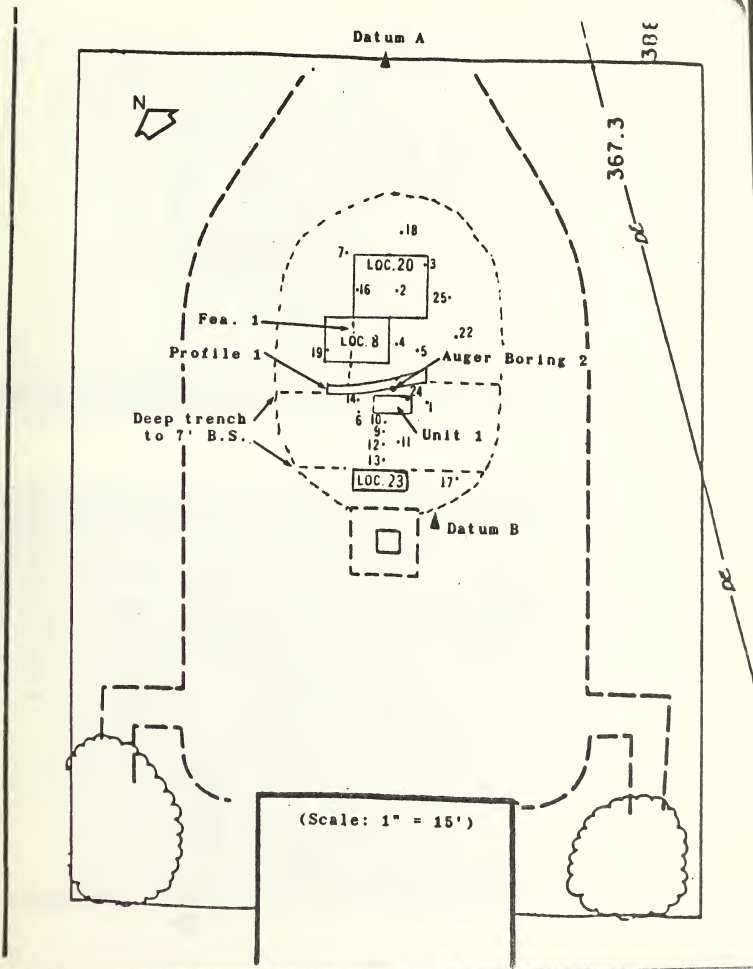
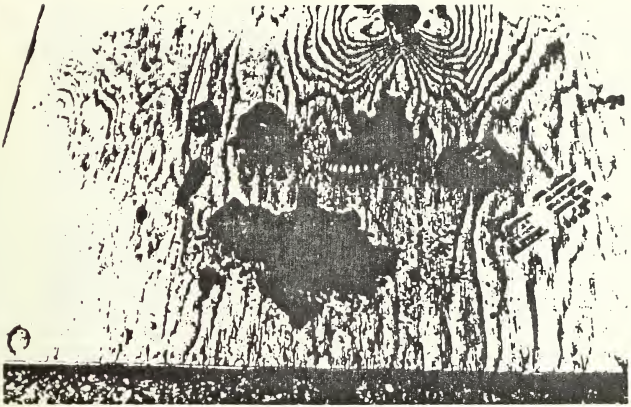
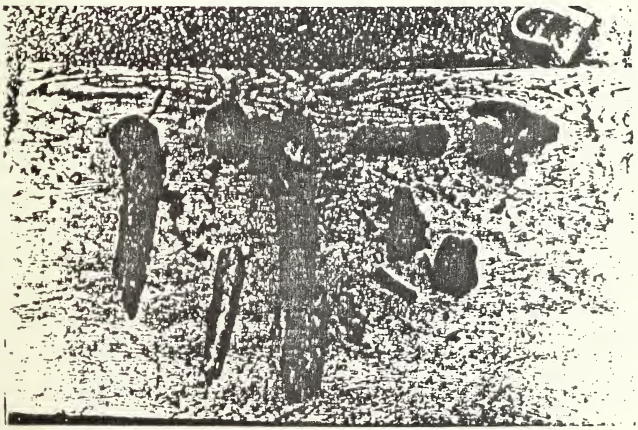


PLATE 1

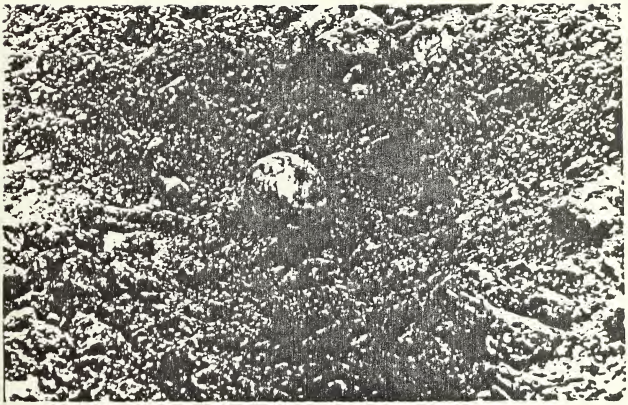


a. Human Remains From Auger Boring No. 2

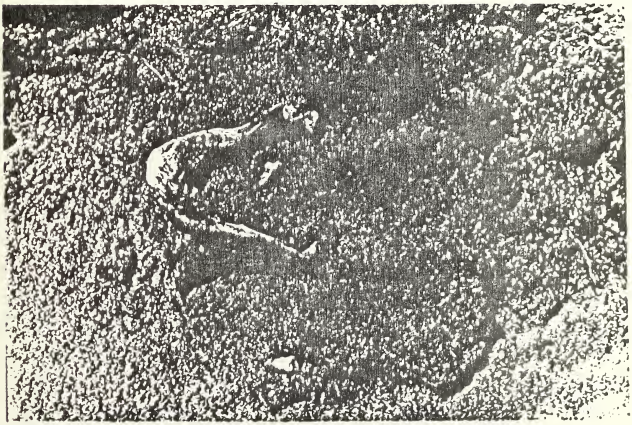


b. Human Remains From Auger Boring No. 7

PLATE 2

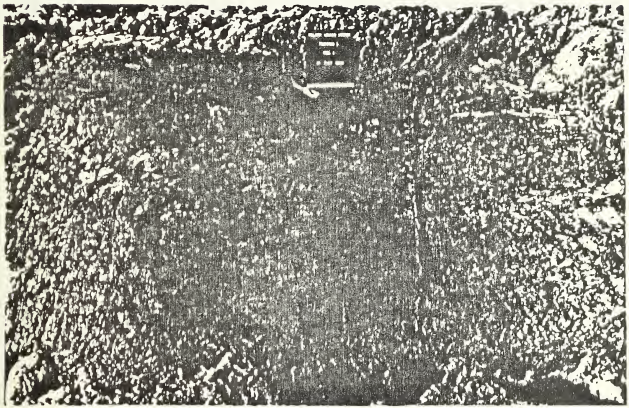


a. Locus 1: Complete Cranium at 30" B.S.

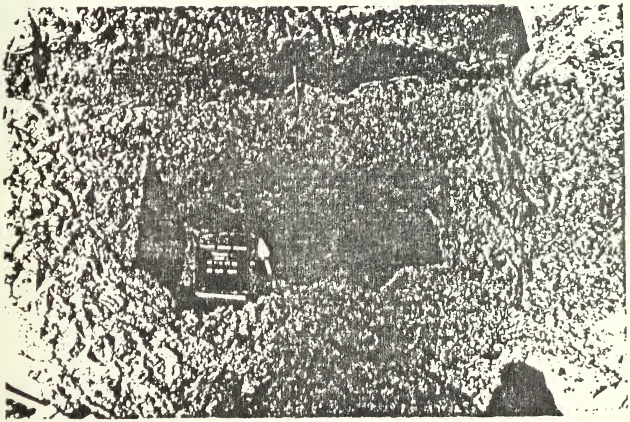


b. Locus 24: Complete Mandible at 7' B.S.

PLATE 3



a. Feature 1: Contact of Strata I and II (Looking South) (scored for emphasis)



b. Test Unit 1 (Looking North)

FIGURE 1

Profile 1
Showing Strata, Human Remains, and Artifacts in Composite View
of North Face of Excavations

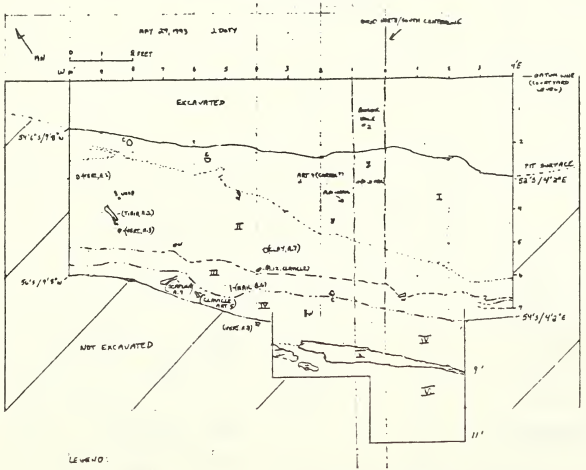
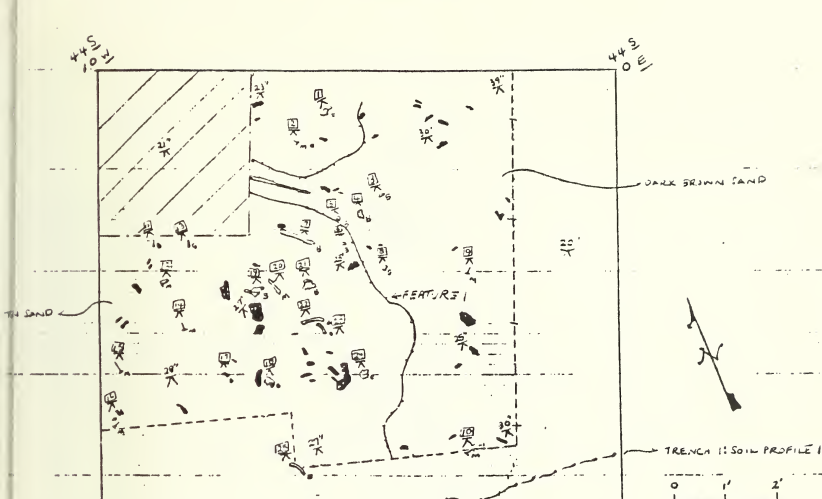


FIGURE 2

Locus 8



ELEVATIONS & DESCRIPTION.

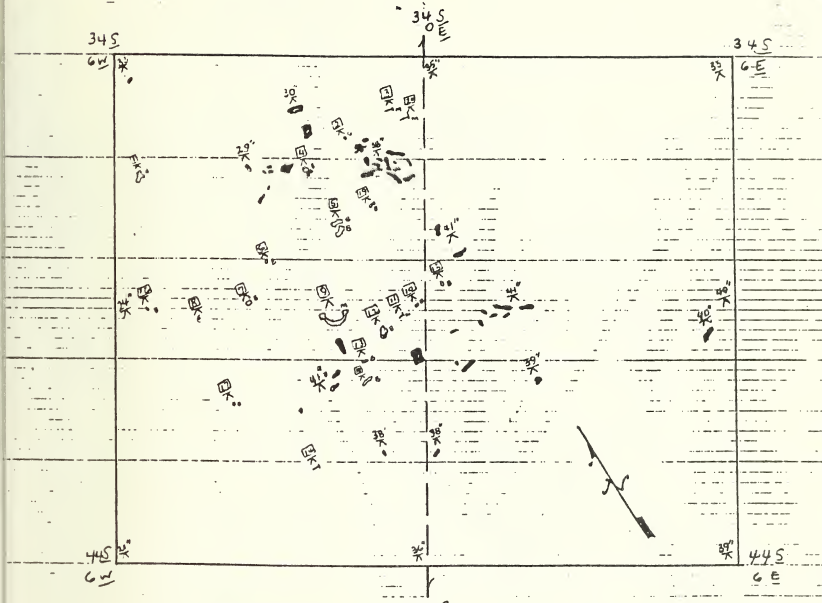
1. 26" BONE - SCAPULA / PELVIS ?
2. 21" METAL - NAIL
3. 20½" BONE - PHALANGE
4. 19½" BONE - FRAG.
5. 20" BONE FRAG
6. 25" BONE FRAG.
7. 22" BONE - HUMERUS
8. 20" GLASS
9. 24" METAL - NAIL - NOT
10. 26½" METAL - NAIL
11. 25" BONE - PHALANGE
12. 26" METAL
13. 24" GLASS
14. 28" METAL - NAIL
15. 25" METAL - NAIL
16. 21" METAL NAIL
17. 26" BONE - METATARSAL
18. 28" GLASS - MELTED
19. 26" BONE - FEMUR
20. 27" METAL
21. 24" BONE - SCAPULA
22. 25" BONE - RIB ? } ARTIFACT = 22
23. 25" BONE - RIB }
24. 27" CERAMIC - WHITE
25. 22" BONE - RIB

KEY:

- WOOD
- BOUNDRY OF TRENCH 1 SOIL
- UNEXCAVATED AREA
- BOUNDRY OF UNEXPOSED A
- BOUNDRY BETWEEN SOIL DISTURBANCE: DARK BR SAND TO THE SOUTH; TAN S TO THE NORTH.
- B BONE
- C CERAMIC
- M METAL
- G GLASS

FIGURE 3

Locus 20



ELEVATIONS & DESCRIPTIONS:

1. 33" BONE - CRANIUM
2. 20" GLASS FRAGMENT
3. 31" METAL - RUSTY NAIL
4. 19" BONE - VERTEBRA.
5. 32" BONE - ½ CRANIUM FRAGS
6. 30" BONE FRAG
7. 31" BONE FRAG
8. 27" GLASS - TWISTED & MELTED
9. 37" METAL HANDLE
10. 36" BONE - PHALANGE
11. 37" METAL - NAIL
12. 40" BONE - CALCANEUS
13. 39" BONE - PHALANGE
14. 37" METAL - NAIL
15. 37" BONE FRAG.
16. 31" BONE FRAG
17. 33" GLASS DROPLET
18. 36" BONE - TARSAL?
19. 31" BONE - METATARSAL
20. 34" METAL - NAIL

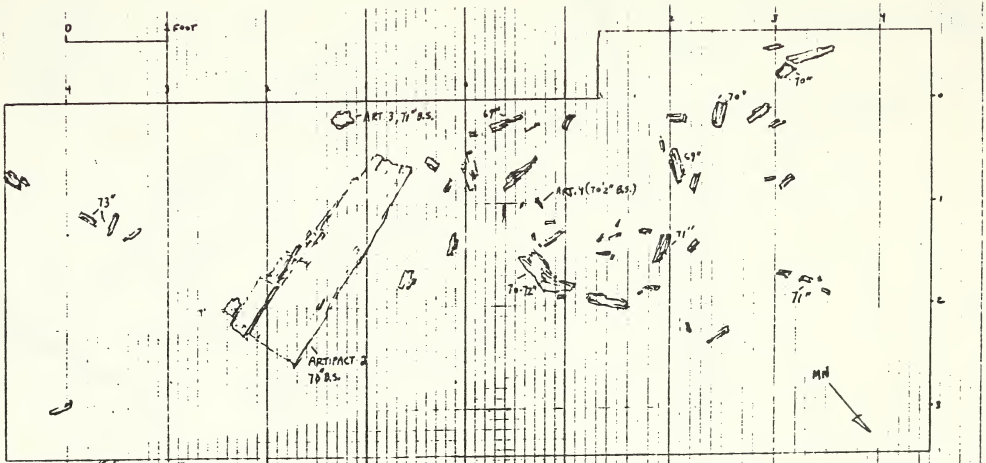
KEY:

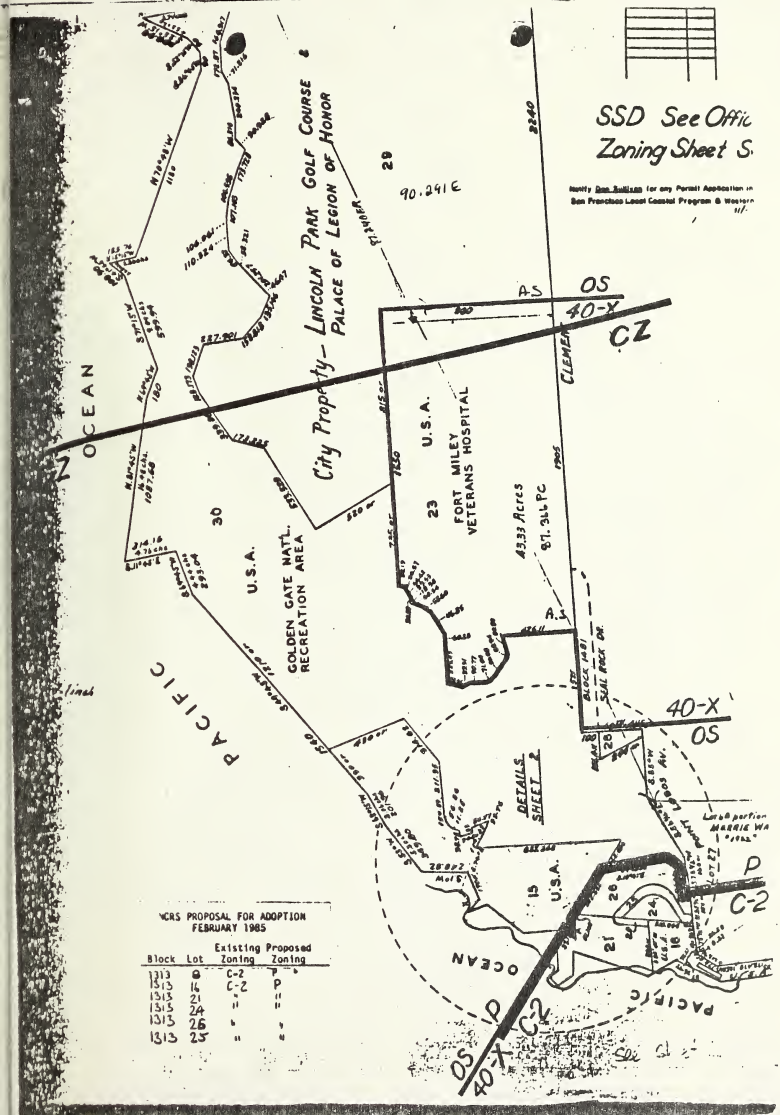
WD WOOD
B BONE
M METAL
G GLASS

SCALE 1" = 2'

FIGURE 4

Locus 23




SSD See Offic
Zoning Sheet S
Notify Dan Sullivan for any Permit Application in
San Francisco Local Coastal Program & Western
City Property— Lincoln Park Golf Course
Palace of Legion of Honor
90.241E
OS
40-X
CZ
OCEAN
U.S.A.
FORT MILEY
VETERANS HOSPITAL
43.33 Acres
87,344 Pc
U.S.A.
GOLDEN GATE NAT'L.
RECREATION AREA
PACIFIC
DETAILS
SHEET 2
U.S.A.
OCEAN
PACIFIC
C-2
P
OS
40-X
WCRS PROPOSAL FOR ADOPTION
FEBRUARY 1985
Block Lot Existing Zoning Proposed Zoning
1313 @ C-2 P
1313 14 C-2 P
1313 21 " "
1313 24 " "
1313 26 " "
1313 25 " "